



2<sup>nd</sup> August 2017

## New Gold Project – Tate River Provides Immediate High Priority Exploration Target

- ◆ Farm-In agreement allows Zenith to earn up to 70% equity in the Tate River gold project from private company Jumani Pty Ltd;
- ◆ A new discovery of gold rich ferruginous quartz veins/stockwork at the Guppy Strike prospect with assays up to 6.74 g/t Au will be Zenith's immediate focus;
- ◆ Due diligence sampling at Guppy Strike by Zenith returned rock sample results up to 3.05 g/t gold and continuous rock chip samples over 50 metres length grading 1.63 g/t Au, from quartz veins sub-cropping sporadically over an area greater than 400 metres in length by up to 100 metres in width.
- ◆ A second and possible third zone of gold rich quartz veining occurs immediately to the southwest of the main prospect area;
- ◆ Setting and geochemical association is indicative of an intrusion related gold system. Nearby deposits of this type include Mungana / Red Dome gold mine that had gold endowment of 2.7Moz Au;
- ◆ Excavator trenching at Guppy Strike is planned to commence in the 2nd week of August, to better define targets for drilling. In addition a surface soil geochemical survey will be completed in August to scope out the overall size of the gold system which remains open to the east, west and south.

Zenith Minerals Limited ("Zenith" or "the Company") is pleased to advise that its wholly owned subsidiary Caldera Metals Pty Ltd has signed a Farm-In agreement with private company Jumani Pty Ltd, whereby Caldera may earn up to 70% interest in the Tate River gold project in north Queensland (Figure 1). The Tate River gold project contains several gold and gold-silver prospects that are considered to be epithermal or intrusion related gold deposit systems.

The immediate focus of Zenith will be to assess the Guppy Strike gold prospect, recently discovered during a program of reconnaissance mapping and rock chip sampling that returned results up to 6.74 g/t Au. The presence of widespread gold mineralisation in surface samples of ferruginous quartz veins and vein stockworks was confirmed by Zenith during its due diligence sampling program that returned **individual rock samples up to 3.05 g/t Au and continuous rock chip samples over 50m length grading 1.63g/t Au** (Figures 2 & 3).

A program of assessment will commence immediately with a program of approximately 10 excavator trenches at Guppy Strike to assess the continuity of gold mineralisation over an area >400m in length by up to 100 m in width following a heritage survey scheduled to be completed this week. In addition a surface soil geochemical survey will be completed in August in an attempt to define the limits of the gold rich quartz vein system.

Project tenure is situated on grazing country with excellent access.

The terms and conditions of the Farm-in are detailed in Section 2 of the attached JORC Table.

### Corporate Details

#### ASX: ZNC

Issued Shares (ZNC)	189 M
Listed options (ZNCO)	24 M
Unlisted options	3.5M
Mkt. Cap. (\$0.10)	A\$19 M
Cash (Jun 2017)	A\$2.0 M
Debt	Nil

#### Directors

**Michael Clifford:**  
Managing Director

**Mike Joyce:**  
Non Exec Chairman

**Stan Macdonald:**  
Non Exec Director

**Julian Goldsworthy:**  
Non Exec Director

### Major Shareholders

HSBC Custody, Nom.	6.6%
City Corp Nom	6.2%
Nada Granich	6.1%
Abingdon	4.1%
Miquilini	4.1%

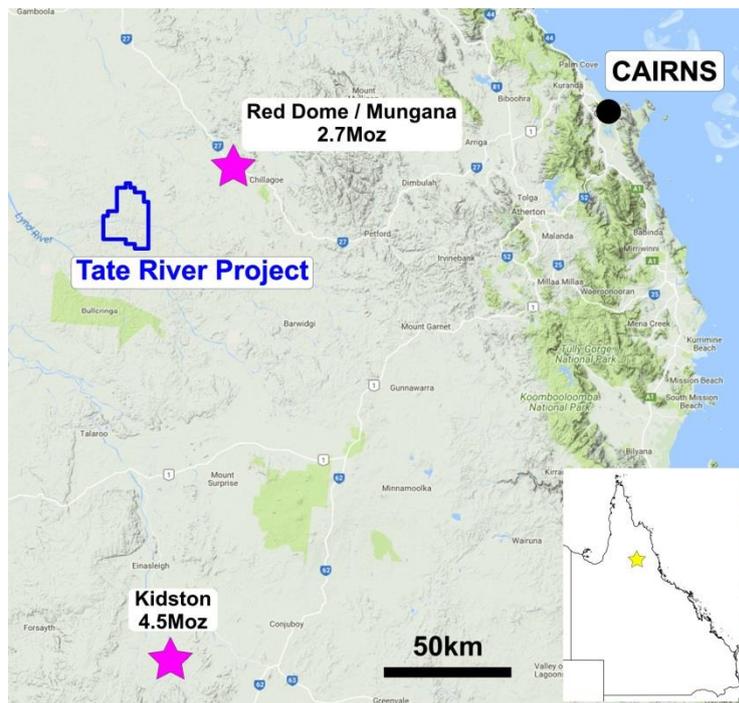
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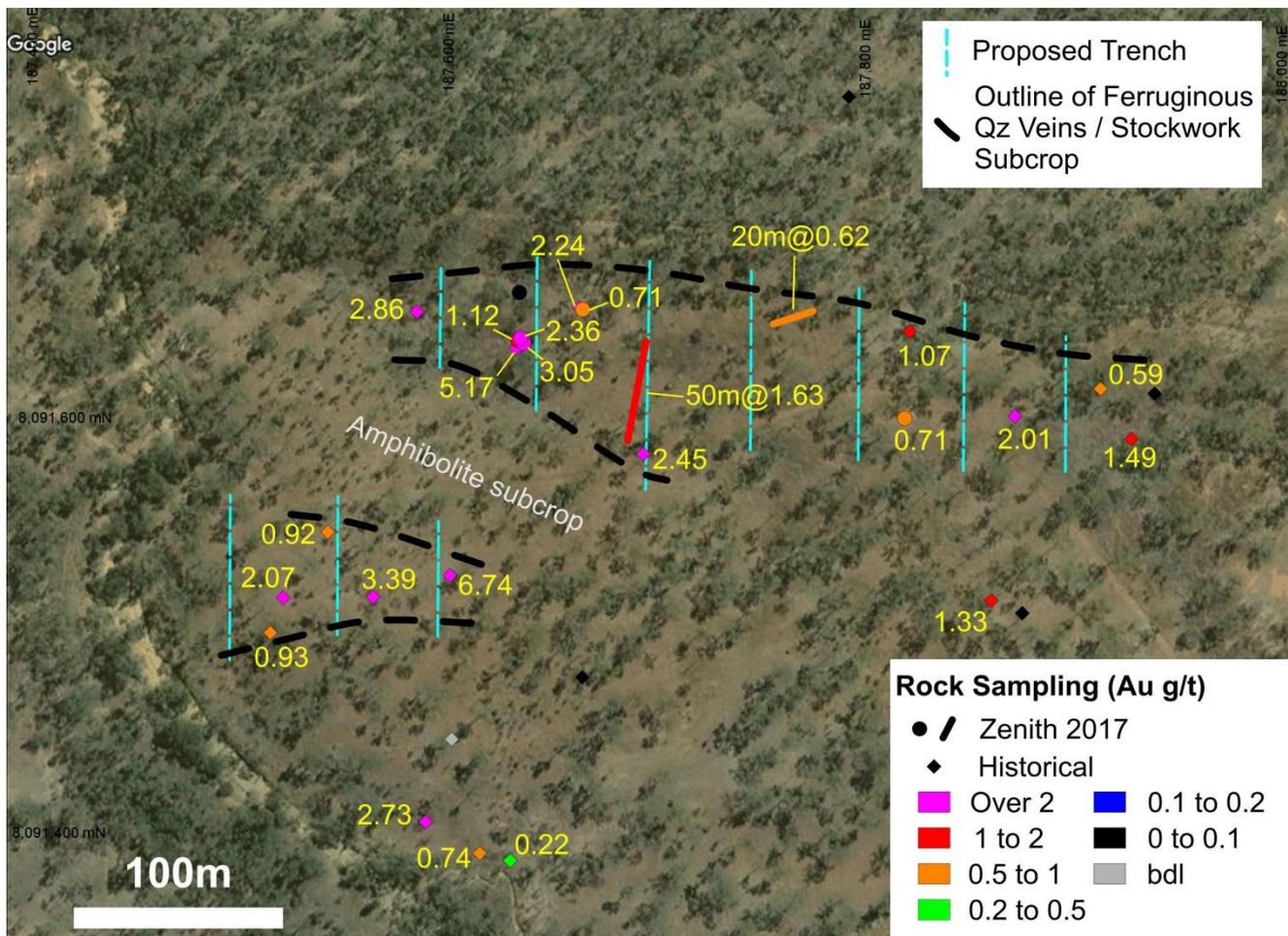
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**Figure 1: Tate River Project – Location Map**  
 (Showing Past production plus current published resources)



**Figure 2: Guppy Strike Prospect Map Showing Gold Rock Chip Results**



**Sample grading 3.05 g/t gold**



**Subcrop of mineralised zone that returned 50m @ 1.63 g/t Au from continuous rock chip sampling**



**Subcrop of mineralised zone that returned 20m @ 0.62 g/t Au from continuous rock chip sampling**



**General location photo of mineralised zone. Note sparse outcrop.**

**Figure 3: Rock Samples**

### **Competent Persons Statement**

The information in this report that relates to Exploration Results is based on information compiled by Mr Michael Clifford, who is a Member of the Australian Institute of Geoscientists and an employee of Zenith Minerals Limited. Mr Clifford has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Clifford consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

**2<sup>nd</sup> August 2017**

### **For further information contact:**

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**Zenith is advancing its project portfolio of high-quality, gold, lithium and base metal projects:**

**Kavaklitepe Gold Project, Turkey (ZNC 30%, Teck 70%)**

- Recent (2013) grass roots gold discovery in Tethyan Belt
- Continuous rock chip sampling to: 54m @ 3.33g/t gold, including 21.5m @ 7.2 g/t gold
- Initial 2016 drill results include: 9 m @ 5.2 g/t Au from surface, 7.8 m @ 7.3 g/t Au from 3.3 m and 16.4m @ 4.7 g/t Au from 82.1m depth. Drilling to recommence in mid/late August 2017.

**American Lithium Projects (Bradda Head earning initial 55%)**

**Zacatecas Lithium Brine Project, Mexico**

- New tenure (26,000 acres) over extensive system of salt lakes within an emerging lithium brine district
- Lithium brines to 2.1% lithium reported in sampling conducted by the Mexican Government from solar evaporation ponds for salt production (10km west of Zenith's new tenure).
- Near surface drilling completed - results awaited, electrical geophysical surveys planned

**San Domingo Lithium, Arizona USA**

- 9km x 1.5km lithium pegmatite field, initial surface sampling returned: 5m @ 1.97%Li<sub>2</sub>O including 2.4m @ 2.49% Li<sub>2</sub>O - Surface sampling and mapping prior to drill testing

**Spencer & Wilson Salt Flat Lithium Brine Projects, Nevada USA**

- Two lithium brine targets in producing lithium region - Geophysical surveys & infill sampling prior to drilling

**Burro Creek Lithium, Arizona USA (ZNC option to acquire)**

- Large scale lithium (Li) clay target under exclusive option - Metallurgical testwork to assess ease of extracting lithium – ongoing, permitting for trenching and drilling in progress

**Australian Projects**

**Develin Creek Copper-Zinc-Silver-Gold, QLD (ZNC 100%)**

- 3 known VHMS massive sulphide deposits - JORC resources, 50km of strike of host rocks.
- 2011 drilling: 13.2m @ 3.3% copper, 4.0% zinc, 30g/t silver & 0.4g/t gold - Drilling planned to extend known deposits, geophysics, geochemistry to detect new targets

**Split Rocks Lithium & Gold, WA (ZNC 100%)**

- 100% owned exploration licences covering 500km<sup>2</sup> in emerging Forresteria lithium district - Surface sampling completed (1715 samples) results awaited.

**Red Mountain Gold-Silver Project QLD (ZNC 100%)**

- Initial reconnaissance rock chip sampling results up to 114 g/t silver and 0.69 g/t gold, associated with strong, open ended silver soil anomaly. Follow-up sampling planned

**Waratah Well Lithium -Tantalum Project WA (ZNC 100%)**

- Extensive outcropping pegmatites (3km x 2km) in north east of tenure, encouraging lithium rock chip sample results up to 0.34% Li<sub>2</sub>O as well as widespread, high-grade tantalum up to 1166ppm Ta<sub>2</sub>O<sub>5</sub>. Additional copper-zinc target being assessed.

**Eraheedy Manganese Project, WA (ZNC 100%) - Manganese province discovered by ZNC, potential DSO drill intersections (+40%Mn)**

**Mt Alexander Iron Ore, WA (ZNC 100%) - JORC magnetite Resource 566 Mt @ 30.0% Fe close to West Pilbara coast, 50% of target untested - Seeking development partner/ buyer for iron project**



## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</i>	Samples were collected by hand, at the surface, from in-situ outcrops.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	Grab samples are believed to be representative of the outcrops they come from.
	<i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</i>	1-2kg rock samples were collected by a geologist, samples were broken using a hammer from outcrop. Rock samples were crushed in the laboratory and then pulverised before analysis.
Drilling techniques	<i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</i>	No Drilling
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	No Drilling
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	No Drilling
	<i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	No Drilling



Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	Rock samples were geologically described
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Qualitative logging
	The total length and percentage of the relevant intersections logged.	No Drilling
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	No Drilling
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	No Drilling
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Samples were analysed at SGS Laboratories in Perth, the samples were crushed, pulverised and assayed for gold using fire assay
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	~2kg of rock was crushed and pulverised and a sub-sample was taken in the laboratory and sent for analysis.
Sub-sampling techniques and sample preparation - continued	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	Sampling was selective and based on geological observations.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Each sample was 1kg to 2kg in weight which is appropriate to test for the grain size of material.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	The samples were crushed and assayed by ICP for trace elements and gold using fire assay
	For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	No XRF or geophysical tools used
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	2 laboratory standards were included in the sample batch returning appropriate levels.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Two company personnel have observed the assayed samples
	The use of twinned holes.	No drilling



	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Field data were all recorded in field note books and sample record books and then entered into a database
	<i>Discuss any adjustment to assay data.</i>	No adjustments were made.
<i>Location of data points</i>	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	Sample location is based on GPS coordinates +/- 5m accuracy
	<i>Specification of the grid system used.</i>	The grid system used to compile data was MGA94 Zone 55
<i>Location of data points - continued</i>	<i>Quality and adequacy of topographic control.</i>	Topography control is +/- 10m.
<i>Data spacing and distribution</i>	<i>Data spacing for reporting of Exploration Results.</i>	All samples are shown on figure 2.
	<i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i>	The data alone will not be used to estimate mineral resource or ore reserve
	<i>Whether sample compositing has been applied.</i>	No mathematical compositing applied
<i>Orientation of data in relation to geological structure</i>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	Samples were taken selectively, randomly and as continuous rock chip samples over lengths of 20m & 50m.
	<i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	No drilling
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	Samples were kept in numbered bags until delivered to the laboratory
<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	Sampling techniques are consistent with industry standards



## Section 2 Reporting of Exploration

### Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i>	The Tate River Project is located within the 100% Jumani Pty Ltd owned exploration permit for minerals EPM 25942. Zenith Minerals Limited via a Farm-In agreement signed 1/08/17 may earn up to 70% equity by spending \$800,000, with a minimum commitment before withdrawal of \$150,000.  The project is located within private grazing properties.
	<i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	All tenements are 100% held by Jumani and are in good standing with no known impediment to future granting of a mining lease.
Exploration done by other parties	<i>Acknowledgment and appraisal of exploration by other parties.</i>	Jumani Pty Ltd discovered gold rich ferruginous quartz veins/stockwork at the Guppy Strike prospect with assays up to 6.74 g/t Au (refer to Figure 2 in body of this report). Sovereign Resources previously reported 2 rock chip sample results in the SW of the Guppy Strike prospect area returning 0.93 g/t Au and 2.73 g/t Au. No other known exploration work has been conducted on this prospect area.
Geology	<i>Deposit type, geological setting and style of mineralisation.</i>	Based on the initial site visit and preliminary evidence the geological setting and geochemical association at Guppy Strike is indicative of an intrusion related gold system.
Drill hole Information	<i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i>	No drilling
	<i>o easting and northing of the drill hole collar</i>	
	<i>o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i>	
	<i>o dip and azimuth of the hole</i>	
	<i>o down hole length and interception depth</i>	
	<i>o hole length.</i>	
<i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i>		
Data aggregation methods	<i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</i>	No high-grade cutting



	<i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i>	No aggregation used
<i>Data aggregation methods - continued</i>	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	No metal equivalents used.
<i>Relationship between mineralisation widths and intercept lengths</i>	<i>These relationships are particularly important in the reporting of Exploration Results.</i>	No drilling
	<i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i>	No drilling
	<i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</i>	No drilling
<i>Diagrams</i>	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	Refer to descriptions and diagrams in body of text
<i>Balanced reporting</i>	<i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	All results reported on Figure 2.
<i>Other substantive exploration data</i>	<i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	No other meaningful or material exploration data to be reported at this stage
<i>Further work</i>	<i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	Follow-up mapping and sampling to define the extents of the gold mineralisation is planned along with trenching to test the true thickness of the poorly exposed gold zones. A systematic soil geochemical survey is also planned.
	<i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	Refer to figures in body of report.